The Geochemical News

NUMBER 22 June 1960

NOMINATIONS FOR OFFICERS FOR 1961

The nominees for next year are:

President:	H.C. Urey
Vice President:	Robert M. Garrels
Secretary:	F.R. Boyd
Treasurer:	George T. Faust
Councilors:	O. Frank Tuttle
	Frans E. Wickman

Urey, H.C., Prof. of Chemistry at large, U. of California, La Jolla, since 1958. Born Indiana, 29 April 1893. Chemist, Barrett Chem. Co., 1917-19, instr. chem., U. of Mont. 1919-21, Ph.D., U. of Calif. 1923; Am. Scandinavian Foundation Fellow, U. of Copenhagen, 1923-24; assoc. in chem., Johns Hopkins U., 1924-29; assoc. prof. chem., Columbia U., 1929-34, prof., 1934-45, exec. officer, dept. of chem., 1939-42. Director of research, S.A.M. Labs., Columbia U., 1942-45; distinguished serv. prof. chem. Inst. Nuclear Studies. U. of Chicago, 1945-52; Martin A. Ryerson distinguished serv. prof. chem., 1952-58. 12 D.Sc. degrees from universities in U.S., Canada, Greece and England; LL.D., U. of Calif. and Wayne State; Silliman lecturer, Yale, 1951. Awarded Willard Gibbs Medal, Nobel prize in chem., Davy Medal of the Royal Soc. London, Franklin Medal of the Franklin Inst., distinguished serv. award of Phi Beta Kappa, Priestley award. Author of The Planets, co-author of Atoms, Molecules and Quanta. Editor, Jour. Chem. Physics, 1933-40. Chief interests: structure of atoms and molecules, thermodynamic properties of gases, separation of isotopes, cosmochemistry. Discoverer of deuterium.

Garrels, Robert M., Prof. of Geology, Harvard, since 1957. Born Michigan, 24 Aug. 1916. Ph.D., Northwestern U., 1941. Instr. geol., Northwestern, 1941-44, asst. prof. 1944-47, assoc. prof. 1948-52; assoc. geologist, U.S. Geol. Surv. 1944-45, geologist 1952-55; assoc. prof. geol., Harvard, 1955-57. Hon. M.A., Harvard, 1955. Author of Textbook of Geology, 1951; Mineral Equilibria, 1960. Chief interests: geochemistry; crystallization of minerals; reactions among minerals; ionic diffusion through rocks.

Boyd, F.R., Geologist, Geophys. Lab., Carnegie Inst., since 1953. Born Massachusetts, 30 January 1926. M.S., Stanford U., 1950; Ph.D., Harvard, 1957. Mineralogical Soc., Geol. Soc. Amer. Chief interests: phase equilibria at high pressures and temperatures, igneous and metamorphic petrology, volcanology.

Faust, George T., Mineralogist, U.S. Geol. Surv., since 1942. Born Pennsylvania, 27 Aug. 1908. Ph.D., U. of Mich. 1934. Assist. in miner., Mich., 1930-35; asst. prof. ceramic miner., Rutgers, 1935-38; asst. chemist-petrog., U.S. Bur. Mines, 1938-40; asst. mineralogist-petrographer, U.S. Dept. Agr., 1940-42; asst. miner., U.S. Geol. Surv., 1943-46, assoc. 1946-47; prof. miner., Indiana U., 1946. Head of mineralogy group, U.S. Geol. Surv., 1948 to present; staff assoc. with solid state group, 1953 to present. Chief interests: Mineralogy and petrology

of magnesite deposits, Watchung basalt flows of New Jersey, thermal analysis and X-ray studies of carbonates and magnesium silicates, phase rule studies on silicate and phosphate systems.

Tuttle, O. Frank, Dean of College of Mineral Industries, Pennsylvania State U., since 1959. Born New York, 25 June 1916. Ph.D., M.I.T. 1948. Teaching fellow, M.I.T. 1940-42; asst., Office Sci. Research & Development, 1942; phys. chemist, Geophys. Lab., 1942-45; U.S. Naval Research Lab., 1945-47; petrologist, Geophys. Lab., 1947-53; prof. geochemistry and chairman, Div. of Earth Sciences, Penna. State U., 1953-59. Chief interests: application of phase equilibria in silicate systems to petrology; mineralogy of rock-forming minerals; structural petrology; high temperature and high pressure syntheses of minerals and rocks; growth of large single crystals.

Wickman, Frans E., Prof. of Mineralogy, Swedish Museum of Natural History, since 1947. Born Spånga, Sweden, 21 March 1915. Fil. kand., Univ. Stockholm, 1938; fil. lic., 1943. Research physicist, Bolidens Mining Co., 1944-46; instructor, U. of Stockholm, 1946-47. Chief interests: isotope geochemistry; metabolic aspects of geochemistry and geology.

COMMITTEES OF THE GEOCHEMICAL SOCIETY FOR 1960

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GEOCHEMISTRY AT HELSINKI

The twelfth general assembly of the International Union of Geodesy and Geophysics will be held in Helsinki, Finland, July 25 - August 6, 1960. A program of great interest to geochemists has been arranged for the first four days of the meetings. A general outline of these geochemical meetings is as follows:

Monday, 25th July:
- 9:30 - 12:30 a.m. - Symposium on Geochemistry (Isotope Geology)
- 2:30 - 6:00 p.m. - Symposium on Geochemistry (Experimental and Theoretical Petrology)

Tuesday, 26th July:
- a.m. - Opening of the General Assembly.
- p.m. - First meeting to discuss the role of geochemistry in international meetings.

Wednesday, 27th July:
- a.m. and p.m. - Symposium on Age Determinations.

Thursday, 28th July:
- a.m. - Second discussion meeting.

At the discussion meetings to be held on Tuesday and Thursday, there will be representatives, not only of IUGG, but also a committee representing the Geochemical Commission, and another committee representing The Geochemical Society. The discussions, however, will not be confined to these official representatives, but are open to any geochemist who can attend the meetings. Since the results of these discussions may very well affect, if not determine, the place of geochemistry in international scientific meetings for considerable time in the future, it is hoped that as many geochemists as possible can be present in Helsinki to take part in the discussions. Perhaps some of those who had planned to attend the Geochemical Symposia to be held in Copenhagen in connection with the meetings of the International Geological Congress (see separate announcement in this news letter) will be able to leave a little earlier than originally planned, and so take part in the meetings and discussions in Helsinki as well as in Copenhagen.

Earl Ingerson

THE GEOCHEMICAL CONFERENCE OF THE HUNGARIAN ACADEMY OF SCIENCES

The Hungarian Academy of Sciences organized a Geochemical Conference which took place from October 5-10, 1959. Thanks to the able leadership of Dr. E. Szádeczky-Kardoss, Professor at the University of Budapest and President of the Council of Geochemistry of the Hungarian Academy of Sciences, this conference was a great success and international in scope.

The program, which was printed in four languages, outlined the principal subjects to be treated:

1. Problems of classification of migmatites. The water content of magmas. Transvaporization and meta-magmatic phenomena (with demonstrations in the field).
2. The present stage of geo-energetics. Solution of problems by thermodynamic methods and by the calculation method based on the ionic potential.
3. Special problems of geochemical methodology: spectro-analytical methods of absolute age and isotope determinations, the microthermo-gravimetric method, redox potential measurements.

Although topics were discussed from a wide variety of branches of geochemistry, the emphasis of the conference was placed on the theories on the formation of the Tertiary volcanic belts in Hungary. The related ores and other exploitable raw materials were also given much consideration. A uniform

treatment of the Carpathian volcanics and of the orogenic volcanics in general was attempted.

Preprints of the major papers (33) were made available. The final versions of the papers are in print at present and will appear in May or June this year. They will be abstracted when received and made available to the members of the Geochemical Society.

G.C. Amstutz
University of Missouri
School of Mines and Metallurgy
Rolla, Missouri

MEMORIAL OF CALDER T. BRESSLER

Calder T. Bressler died on Mt. Rainier at 5:30 a.m. on September 3, 1959. This short statement conceals the fact that "Tup" Bressler, a devoted geologist, was doing the two things he liked most, climbing a volcanic peak of the Cascades and studying geology. Also hidden is the tragic drama of a heavy snowstorm, a radio call for aid for Dr. Bressler who had apparently developed "flu", the crash of a plane carrying first-aid supplies when it had almost reached its objective, the loss of the two mercy fliers, the death of Dr. Bressler from pneumonia, and finally a rescue party reaching the plane and base camp after the storm had subsided.

Dr. Bressler was born in Minneapolis on August 26, 1919. After graduation in 1942 from the University of Washington he served as geologist with the U.S.G.S. for four years (1942-46) in the Alaskan Branch. From 1946 to 1951 he was a graduate teaching assistant in mineralogy and petrology at Pennsylvania State and received his Ph.D. in 1951.

In 1951 Dr. Bressler returned to the west as Assistant Professor of Geology at the University of Idaho, and in 1952 he joined the faculty of the University of Oregon as an Assistant Professor. In 1957 he went to Western Washington College of Education at Bellingham as Associate Professor of Geology where he planned the geology facilities for a new science building. His enthusiasm for advancing the study of geology quickly won him the esteem of his colleagues and the administration of the College.

Dr. Bressler was a member of the Geochemical Society, the Geological Society of America, the American Geophysical Union, the Society of Economic Paleontologists and Mineralogists, and the Association of Geology Teachers.

"Tup" Bressler had broad interests, but of greatest importance to him were his students. Often at the expense of his own work, he would spend hours beyond those normally required in order to help students with special projects. He was meticulous in thesis guidance and many students look back with gratitude to the personal attention and friendly supervision provided by "Tup" Bressler.

Lloyd W. Staples

MEMORIAL OF BELA HUBBARD

Dr. Bela "Doc" Hubbard, a truly natural scientist, succumbed to a heart condition on November 4, 1959, at Tucson, Arizona. He is survived by his wife, Florence Flynn Hubbard and his son, Thomas Hill Hubbard of Tucson, by a sister, Mrs. Alice H. Carpenter, and a brother, Henry Gurnsey Hubbard.

He was born August 10, 1890, in Detroit, Michigan, into one of the oldest and most respected of the early colonial families of America. He was the third generation of scientists in the Hubbard line.

Hubbard's undergraduate studies were made at the Michigan School of Mines, the University of Wisconsin and Columbia University. He received a Bachelor of Science degree from Columbia in 1914, and a Master of Arts degree in 1916. He served at the front in France as a Lieutenant in the U.S. 29th Army Engineers, and at the close of the war continued his studies at a French university. In 1922, he was granted a Ph.D. degree by Columbia University.

Early jobs included that of Geological Assistant in the Paleontological and Stratigraphical departments of Columbia University, 1915-17; field work in Puerto Rico and the Virgin Islands in the summer of 1916 for his Doctor's thesis; service with the Topographic Section of the U.S. Geological Survey in 1917, and Instructor in Queen's University, Canada, in 1919-1920.

While at Queen's, Hubbard accepted summer employment with The Carter Oil Company. In 1920, he was assigned the job of making a geological reconnaissance of the oil possibilities of the Amazon headwaters region of eastern Peru and Ecuador. Later in 1922, he took over the job of Chief Geologist for the Standard Oil Company of Venezuela.

In 1927, he became Chief Geophysicist of the newly formed Creole Petroleum Corporation in Venezuela. Three years later in 1930, he was called to The Carter Oil Company, Tulsa, to head their department of geophysics, where he remained until 1935, when he was called to New York to become Assistant to the Chief Geologist of the Standard Oil Company (N.J.). In 1946, he retired from active service because of poor health.

Hubbard was a member of the American Association of Petroleum Geologists, the Society of Military Engineers, Sigma Xi, American Association for the Advancement of Science, the New York Academy of Sciences, the Paleontological Society, the American Institute of Mining, Metallurgical and Petroleum Engineers, the Society of Exploration Geophysicists, of which he was Secretary-Treasurer in 1934, the Geophysical Union, the Mineralogical Society, a Fellow of the Geological Society of America, and the Geochemical Society.

There is no characteristic of Bela Hubbard concerning which his host of friends are in more emphatic agreement than that of his personal relationship and standing with all who knew him. Indeed, generosity and consideration for others were two of his outstanding traits. Others were his strong sense of humor, his moral and intellectual honesty, in his personal life as well as in science, an absence of pretense, and a fine sense of loyalty to all his friends and associates.

Lewis G. Weeks

BOOK REVIEWS

AN INTRODUCTION TO RADIATION COUNTERS AND DETECTORS, by C.C.H. Washtell. 115 pages, 36 diagrams, 16 half-tone plates. Philosophical Library, Inc., 15 E. 40th St., New York, 16, N.Y., 1960. $7.50

This is, the exception of the price, a modest volume written to orient the increasing number of workers using, in many instances for the first time, a variety of counting devices in the applications of radioactive techniques in both industry and research. It is to be followed by a second book by the same author, which is to be a much more comprehensive volume entitled "Nucleonic Instrumentation."

The book has seven chapters and an index. Chapters 1 and 2 treat the historical aspects of the subject and give an elementary presentation of atomic structure. Chapter 3, on radiation detectors, discusses the fundamental theory of the elementary gas-filled counter, ionization, variations with voltage, saturation proportionality, Geiger action, counting and integrating ionization chambers, and proportional and Geiger counters.

Geiger-Müller tubes is the subject of Chapter 4. This includes a description of the various commercial types for which manufacturer's symbols are given. The manufacturers represented in the tabulation include General Electric Company, Mullard Ltd., and 20th Century Electronics Ltd. In Chapter 5 are described other types of detectors based on ion collection, and Chapter 6 is a summary of detection methods that are not based on ion collection (cloud chambers, scintillation counters, photomultipliers, and phosphors). Chapter 7 concerns itself with dosimetry, and discusses radiation hazards and personnel protection devices such as the film badge, quartz fiber dosimeter, and various chemical methods. An appendix lists the elements in alphabetical order of their chemical symbols.

This is a highly useful work for all individuals concerned with the detection of radioactive emanations, both natural and synthetics.

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NUCLEAR POWER PLANT, by E. Openshaw Taylor. 184 pages, 54 figures, and 4 appendices. Philosophical Library, 15 E. 40th St., New York, N.Y., 1960. $7.50

The purpose of this book is to provide a review of the fundamental ideas that underlie nuclear power generation. The author assumes that the reader has experience corresponding only to that receivable in the 6th grade of our public schools. Thus the treatment of the physics and engineering problems involved are couched in elementary terminology that should be understandable by laymen. Subjects encompassed include a discussion of energy requirements and resources for the world, an elementary discussion of nuclear physics, a description of reactor physics, descriptions of the types of reactors together with their classification, control and instrumentation of nuclear reactors, and finally the economics of nuclear power stations. The four appendices are 1) a table of the elements which includes not only mass number and per cent abundance of the isotopes, but thermal cross sections and notes relative to nuclear power applications; 2) a discussion of the mean free path of neutrons and their interactions in terms of neutron flux; 3) a discussion of reactor theory; and 4) a chronological listing of the events leading to the initiation of nuclear power. This is an instructive, well written and well organized piece of work.

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DANA'S MANUAL OF MINERALOGY by Cornelius S. Hurlbut, Jr., 17th Rev. Ed. xi + 609 pp. 634 figures. John Wiley & Sons, Inc., New York, 1959. $11.50.

This oft revised manual has acquired a new look. Professor Hurlbut in this revision has not jettisoned the basic data and theories to make room for the novel but has wisely applied the modern developments in chemistry and physics in the interpretation of mineralogical data and observations.

The use of the Groth names for the crystal classes and the separation of the terms isomorphism and solid solution should prove not only useful but wise decisions.

The addition of such topics as crystal projections, rules for crystal orientation, Paulings rules, electronegativity of elements, phase rule diagrams for carbon and for the polymorphs of Al_2SiO_5, in this reviewer's opinion, definitely move this book out of the category of a "Manual" into that of a "Textbook".

This revised edition should be favorably received by students of both the earth sciences and physical sciences.

George T. Faust

SOIL, GRASS AND CANCER. Andre Voisin. Philosophical Library Inc., 15 E. 40th St., New York 16, 1959. 302 pp.

This book, written by an experienced agriculturalist who is extremely widely read and well informed, is highly suggestive and valuable. His fundamental thesis is that 1) the soil makes the grass (fodder), 2) the grass makes the animal, 3) the soil makes the man. "Animals and men," he says, "are the biochemical photograph of the soil"

The author makes a strong case for the influence of the soil on a large number of human diseases, among which are some such as endemic goiter that are well recognized and established. Diseases of animals caused by mineral lacks or imbalances, the world over, are reviewed; many of these observations have a firm foundation. In the course of the sixty-six chapters--rather a discursive array--the author discusses the importance of boron, idodine, phosphate, calcium, sulfate, potassium, sodium, iron, copper, molybdenum, magnesium, manganese, zinc, and cobalt. His sophistication is shown by his realization that a traditional chemical analysis of a soil or water or foodstuff needs supplementation by biological experiements, partly because in the trace element field, for example, chelation may be an important factor. He cites evidence to prove and emphasizes the fact that mineral deficiencies or imbalances in the soil may result in altered metabolism in the "grass" so that the

production of specific amino acids, vitamins (vitamin A conspicuously), and possibly other nutritionally important items is decreased. Accordingly he emphasizes that when "milk" or some vegetable product is used in a nutritional experiment, the results may be meaningless unless the character of the soil from which the product was derived is specified. He emphasizes the fact that we remove with crops all of the nutritionally important elements from the soil, but we tend to replace not more than four or possibly seven in fertilizers. He advocates the judicious and intelligent use of all types of fertilizers.

Having become convinced that many human ills can be traced to the soil, it is but natural that the author inquire into the problem of cancer. The most definite evidence presented on this subject has to do with cancer statistics in Wales and in Holland as they are related to the types of soil and the drinking water used. One would be rash indeed to hold the opinion after reading Voisin's book that soil has nothing to do with cancer.

While this book may give pleasure and comfort to certain faddists, who will select from it what they most like, the author deserves commendation for his attempt to be objective and at the same time stimulative. The contents of the volume should not be swallowed whole. The author seems inclined, for example, to minimize the genetic aspects of the problem. However, the various ideas suggested merit digestion and critical consideration. The book is an important one.

Roger J. Williams
The University of Texas
and
Clayton Foundation Biochemical
Institute

GENERAL CRYSTALLOGRAPHY, A Brief Compendium. By W. F. de Jong with the collaboration of J. Bouman. 281 pp, 231 figures, 41 tables. W. H. Freeman and Co., 660 Market St., San Francisco 4, California. $6.00.

This compact volume is a survey of crystallography from Steno to tensors. The four principal divisions are based on subject matter, tempered by historical discipline. Part I is a complete review of classical geometric crystallography. Part II is a presentation of structural crystallography including a summary of x-ray diffraction techniques. Part III, which is entitled Chemical Crystallography, is a consideration of the actual structure composed of atoms held together by mutual forces. Part IV is devoted to physical crystallography. It includes a brief introduction to tensor notation which leads to the expression of the physical properties with emphasis on the significance of anisotropy in crystals.

Whereas the latter parts of the book are very modern in approach and International nomenclature is used for the crystal classes, Groth's geometric form names are not used. The symbols used for the indices of refraction have disappeared from new United States publications. Cleavage, an important feature of crystals, is sketchily presented with no mention of crystallographic significance.

The continuity of the text was not damaged in the excellent translation from Dutch to English. Many useful references are given throughout the book. Anyone interested in any way in crystallography will find this comprehensive treatment a very useful addition to his library.

Malcolm A. Conrad
University of Michigan

PRINCIPLES OF MINERALOGY. By William H. Dennen. 429 pp. The Ronald Press Co., 15 E. 26 St., New York 10, N.Y. $7.50.

In writing this new book, the author hopes to present mineralogy as a study of the physical, chemical, and geometrical aspects of matter rather than as a course in mineral identification. The book is divided into two parts, the first (211 pp.) covering general principles, and the second (195 pp.) descriptive mineralogy. It also contains an appendix of atomic parameters, and a subject

and mineral index. Numerous excellent references are given at the end of chapters.

The six chapters of Part I cover such subjects as symmetry, crystal chemistry, mineral formation, and chemical and geometric variations in minerals. This part of the book contains extensive information, much of which was previously found only in the literature. In particular, the chapter on mineralogical relations assembles information about isomorphism, polymorphism, crystal imperfections, and various other chemical and geometric variations. Because so many fundamentals are mentioned in Part I, the author obviously had to eliminate some subjects and treat others in a rather cursory manner. As a result, this reviewer seriously doubts if the beginning student will be able to determine electron configuration from the brief discussion of quantum numbers. Similarly, the brief section on international symbols virtually necessitates a knowledge of their use for symmetry notation. In contrast, a more thorough discussion is given of the relatively obsolete Schoenflies notation. The most noticeable omission in this book is the absence of a discussion of introductory x-ray crystallography. It seems rather unfortunate that such an important aspect of modern solid state and mineralogical study should receive virtually no mention.

Part II contains descriptive data for approximately 150 minerals arranged according to chemical composition. In addition to the usual physical and chemical properties, this section lists the important isotypes, isomorphs, and polymorphs for individual species. The inclusion of numerous structural diagrams is a welcome addition. Inasmuch as fundamental principles are stressed in this book, descriptive data, so commonly found in other mineralogy texts, are lacking. The book contains neither determinative tables nor information on localities or uses of minerals. Actually, this could have been added without lengthening the book to any noticeable extent.

The author's goal in writing this book is to provide students with a mineralogical background that will aid them in studies where solid state considerations are important; to provide a book which will bridge the gap between elementary texts and more advanced works; and finally, to provide descriptive mineralogical material. Generally, this goal is met. The book contains much information and is abundantly illustrated with line drawings.

Ralph M. Perhac
University of Michigan

APPARATUS AND METHODS OF OCEANOGRAPHY, PART I: CHEMICAL. By H. Barnes. 341 pages. Interscience Publishers, New York, 1959, $5.75.

In general this book gives a clear description of the chemical methods and techniques used in oceanography.

Therefore, it goes far in fulfilling its stated purpose of compiling descriptions of chemical procedures useful in oceanography in a single text and toward eliminating the necessity of carrying a large library on shipboard. Analytical procedures are given for inorganic and organic nitrogen (several methods depending on the oxidation state of nitrogen), inorganic and organic phosphorus, inorganic silicon, inorganic and organic carbon, oxygen, and various trace metals. Consideration is also given to pH measurements, determination of plankton content, filtration, and other subjects of interest. Various instruments useful in this work are described and compared.

Unfortunately, the chapter on errors and precision is not entirely clear. Several of the descriptions on the use of the statistical tables included are difficult to understand; one of these tables was so poorly explained that it seems to be impossible to use it without referring to a text on statistics.

However, the other tables (there are 45 in all) are easily understood and very useful in conjunction with various of the analytical techniques described.

Paul L. Cloke
University of Michigan

DICTIONARY OF ATOMIC TERMINOLOGY, By Lore Lettenmeyer. 298 pp. Philosophical Library, Inc., 15 E. 40th St., New York 16, N.Y. $6.00.

This is a four-language dictionary, with the initial listings in English and their German, French and Italian equivalents. No definitions of the terms are included. Fields covered are those of atomic and nuclear physics, reactor engineering, and radiation physics. There are 1814 entries, followed by a German index, a French index, and an Italian index. The primary purpose of the book is to facilitate the study of relevant foreign literature in the fields mentioned above.

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CALENDAR

June	
22-24	Conf. on Standards and Electronic Measurements, sponsored by Nat'l. Bureau of Standards, IRE, AIEE - Boulder, Colo.
26-July 1	ASTM, Ann. Mtg. on Mass Spectroscopy - Atlantic City.
27-29	Am. Chem. Soc., Division of Physical Chemistry, Symposium on Status of Problems in Molecular Structure - Seattle.
27-July 1	Nuclear Chemistry (Gordon Res. Conf.) - New London, N.H.
July	
4-8	Chemistry at Interfaces (Gordon Res. Conf.) - Meriden, N.H.
4-8	Chemistry and Physics of Isotopes (Gordon Res. Conf.) - New Hampton, N.H.
11-18	2nd World Conf. on Earthquake Engineering, organized by Science Council of Japan in cooperation with Japan Soc. of Civil Engineers, Architectural Inst. of Japan, Seismological Soc. of Japan - Tokyo and Kyoto, Japan.
18-22	Radiation Chemistry (Gordon Res. Conf.) - New Hampton, N.H.
25-29	Solid State Studies in Ceramics (Gordon Res. Conf.) - Meriden, N.H.
18-22	High Pressure Research (Gordon Res. Conf.) - Meriden, N.H.
Aug.	
3-5	Wyoming Geological Assoc; trip to Big Pine-LaBarge area, Snyder Basin and Wind River Mtns. to study geology of western-most Wyoming overthrust belt. Write: C.A. Burk, Box 1331, Casper, Wyo. Guidebook.
6-12	19th International Geographic Congress, General Assembly of the IGU and meetings of the IGU Commission, Stockholm, Sweden. Inquire: The International Geographic Congress Postfack - Stockholm 6, Sweden.
14-24	7th International Congress of Soil Science - Madison, Wis.
15-25	XXI International Geological Congress, University of Copenhagen, Denmark. American Geological Institute, 2101 Constitution Avenue, N.W., Washington 25, D.C.
20-25	International Mineralogical Assoc., 2nd General Meeting-Mineralogical Museum, Univ. of Copenhagen, Denmark.
30-Sept. 2	11th Alaska Science Conf. sponsored by AAAS, Alaska Division, Cook Inlet Branch, Anchorage.
Sept.	
8-10	Intermtn. Assoc. of Petr. Geologists- E. Nev. Geol. Soc., joint field trip, to include the geology of Central Nevada in the Ely region. Write: Walter M. Winfrey, Box 269, Ely Nevada.
9-10	Friends of the Pleistocene, field trips at Promontory Point (SP railroad) gravel pit in Little Cottonwood Creek area (20 mi S of Salt Lake City). Lake Bonneville stratigraphy and correlations with glacial units. Write: R.B. Morrison, U.S.G.S., Federal Center, Denver, Color. or H.D. Goode, U.S.G.S., 503 Federal Bldg., Salt Lake City, Utah.
11-16	American Chemical Society., 138th Meeting - New York City.
12-18	International Mining Congress, Hungarian Mining and Metallurgical Society - Budapest.
Oct.	
5-8	Ninth National Clay Conference sponsored by the Clay Minerals Committee of the National Academy of Sciences-National Research Council - Purdue University, Lafayette, Indiana.
5-7	Rocky Mountain Minerals Conf. - Salt Lake City, Utah.

ION EXCHANGE COLUMN

Personals

It is with regret that we learn of the death of Professor C. Andreatta of the Mineralogical Laboratory of the University of Bologna on February 6, 1960. A memorial will appear in the next issue of Geochemical News.

On May 13, 1959, Dr. Einar Jensen of Villa Veien 3, Rjnkan, Norway, passed away.

Professor A. Schuller has accepted the position of Professor of Mineralogy, Petrography and Mineral Deposits at the University of Heidelberg as of the first of April, 1960. Professor Paul Ramdohr has retired from active teaching. We wish them both well in their new ventures.

Articles

The trade journal, "Research and Development", has recently published two noteworthy articles for geochemists; one in the April, 1960 issue (Vol. 11, No. 4, pp 5-16) entitled, "Radioisotopes Without Tears". In the May number of this year in the same journal (Vol. 11, No. 5, pp 5-12) is a summary article on recent developments in the use of beryllium oxide.

The publication from the Iowa State University Experimental Station, Soil Research Laboratory at Ames, Iowa, continues to contain both interesting and informative articles, many of which provide information in fields closely related to mineralogy, petrology and soil science. In the November-December issue of 1959, (Vol. 3, No. 6) is a general, entertaining summary entitled "Particle Sighs (Size) and Gradation".

Several articles of interest to geochemists were noted in "Jahreshefte des Geologischen Landesamtes in Baden-Wurttemberg Vol. 3, 1958". They are:

"Die sekundären Uranmineralien des Schwarzwaldes", by Kurt Walenta.

"Die antimonerzführenden Gänge bei St. Trudpert im Münstertal und bei St. Ulrich (südlicher Schwarzwald)", by Kurt Walenta.

"Der Malsburgpluton im südwestlichen Schwarzwald", by Winfried Zimmerle.

"Na-Ca-Cl-Mineralwasser aus dem Zechsteimdolomit von Eberbach", by Ernst Becksmann.

"Quotables"

"Through metamorphic recrystallization secondary minerals like chlorite and epidote were formed, giving a green color to the rocks. Continental petrologists have called them roches vertes pietre verdi, or Grüngesteine. Following an old Italian custom, we shall call them ophiolites." from T.F.W. Barth, 1952, Theoretical Petrology, Wiley, p. 184.

Sand-in-the-Gears-of-Learning Department

"Blastopsammitic - phenocrysts in a metamorphosed sandstone which are due to relict structure in the sandstone."

"Discovery of a huge columbium ore deposit in Araxa, Minas Gerais, Brazil, has been announced by K.C. Li, president of Wah Chang. Mr. Li, who also spoke at the annual meeting of AIME in

New York, said that approximately 7.5 million tons of contained columbium was present in the deposit which could be milled to plus 70% Cb_{205} by a unique and simple mechanical process!" -- from Engineering and Mining Journal.

Also from Engineering and Mining Journal (Vol. 161, No. 4 p. 236) we have, "Stoping has started in the Montecatini kyanite mine of S. Cataldo near Caltanissetta, Sicily. The mine is claimed to be the most modern in Europe.

The rich Sicilian kyanite orebody was found by Montecatini a little over two years ago.

The kyanite will be mined at a rate of 2,000 metric tpd covering Italy's potash needs. Italy spends $6.4-million to import 50,000 metric tons of potash for fertilizers a year."

Sericitized kyanite, no doubt!

From the Mineralogical Magazine, Vol. 32, 1959 p. 263:

"B. Kamb and W.C. Oke (personal communication, 8 May 1959) have identified erionite in basalt dredged from the Columbia River at Rock Island Dam, near Wenatchee, Washington, D.C."

E. Wm. Heinrich
Editor

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ANNOUNCEMENT

The Geochemical Society announces that translations of the Russian Journal Geokhimiya for the years 1956 and 1957 are now in progress and it is anticipated that No. 1 of 1956 will be available in late June 1960. The complete volume (8 numbers) for 1956 should be published by the fall of 1960, to be followed by that for 1957. Orders for these two volumes are now being accepted via the blank below.

The Geochemical Society
c/o Prof. Earl Ingerson
Department of Geology
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